

## REMARKS

### *Status of the Application:*

Claims 1-20 are the claims of record of the application. Claims 1-3, 5-10, and 12-20 have been rejected and claims 4 and 11 have been objected to and would be allowable if written in independent form.

### *This is also a Request for Continued Examination*

Applicants Request Continued Examination under 37 CFR 1.114. The associated fee is included.

### *Amendment to the Claims:*

Applicants have amended the claims to more clearly state the invention so as to more clearly indicate differences with the cited references.

### *Allowable Subject Matter*

Regarding claims 4 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The references of record do not disclose, teach, or suggest the claimed inventions of (in combination with all other limitations in the claims), identifying regions of graphics to be printed on said carton that are likely to experience printing ink bleeding and compensating for such bleeding in laying out said regions of said graphics as set forth in claims 4 & 11.

### *Response to Previously Provided Arguments*

Applicant's amendments, filed 06/30/2008 were entered and fully considered. In light of the applicant's amendments and arguments, the previous rejection(s) have been withdrawn. This means they were persuasive. However, upon further consideration, a new

ground(s) of rejection(s) has been made, and applicant's arguments have been rendered moot.

*Claim Rejections -35 USC § 103*

**In paragraph 2 of the Office Action, Claims 1-3, 5-10, and 12-20 were rejected under 35 U.S.C. 103 as being unpatentable over Dimensional Impressions Score! X, © 2002 Dimensional. CAD/CAM Systems. Score! X in view of Tacke, US2003/0098994.**

Claim 1, as amended, now recites a computer-implemented method comprising:

- (a) accepting structural information relating to a carton constructed of a planar substrate that will be cut and folded to yield a three-dimensional carton having surface regions that will be printed with graphics;
- (b) creating a three-dimensional computer-generated image of said carton on a computer monitor;
- (c) accepting said graphics or interacting with a user to design said graphics to cover said surface regions of said carton;
- (d) interacting with said user to superimpose said graphics accepted or designed at step (c) wherein said three-dimensional computer-generated image includes said superimposed graphics;
- (e) interacting with said user to manipulate, as required, said graphics accepted or designed at step (c) to cover relevant said regions as viewed on said computer-generated image on said computer monitor;
- (f) receiving from said user, said user confirming from visualizing said computer-generated image created at step (c), an indication of acceptability of graphics covering relevant said regions, and modifications, if required, of said graphics; and

(g) determining and outputting computer-readable data containing said accepted or designed graphics whose acceptability was received at step (f), said computer-readable data usable for printing of said graphics upon at least some surface regions of said planar substrate.

As stated in the earlier response, Score! X is now owned by the same entity as the subject application.

To provide a clearer view of Score!X, Applicants are submitting as an Appendix to this response, the Score!X “Training Manual and User Guide.”

To make the distinction between the present invention and the cited references clearer, Applicants have amended the claims, stating, for example, the order of steps differently. No order is to be assumed in the claims as originally filed.

Score!X is a product previously owned by Artwork Systems, Inc. Artwork Systems, Inc. is now commonly owned with the present invention.

Both the present application and Score!X are for the design of cartons, and each provides the ability to position and size graphics in top of a structural design of a carton and view the results on a three-dimensional rendering of the final carton on a computer monitor. An operator operating Score!X is able to produce data, e.g., a file containing a three-dimensional representation of a carton. Graphics from the flat substrate are used as texture images for the different flaps and panels of the box. Score!X then “folds-up” the combination to display a rendering of the three-dimensional carton with the graphics on the panels and/or flaps.

Score!X does not provide for any manipulation of the graphics itself, or for determining and outputting data, e.g., a file that is usable for printing the graphics on the substrate from which the carton is made.

The present invention is about producing data, e.g., a graphics file—a two-dimensional data file—which is then printed on the substrate which is then cut up, scored for folding, if required, and folded into the three-dimensional physical box. The present invention, therefore, is about graphic design for printing on the box. While programs like Score!X deal with placing graphics and “folding” to produce a three-dimensional representation for *viewing* by a designer, as well as CAD data for cutting the box, the

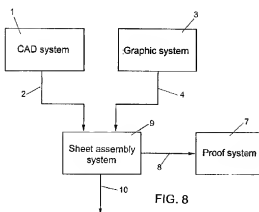
present application is more concerned with generating a graphic design with the aid of three-dimensional views, and when a user indicates acceptability, “unfolding” the three-dimensional combination to generate and output data, e.g., a file for printing on the substrate.

Tacke deals with a similar fields -- package design. Take in FIGS. 1-7 and paragraphs [0002] to [0009] describes what Tacke calls a “conventional working sequence” for creating and producing packaging. Such packaging can be produced, for example, using Score!X for seeing a 3D proof of the packaging with graphics placed on it, i.e., folding a 2D design.

Paragraph [0012] described in summary form as a method Tacke’s contribution: a method of producing proof data for a blank of a package in an electronic reproduction system for packages, including the steps of A) linking CAD data and graphic data to form blank data, producing, from the blank data, printing data describing a printed sheet having the blank, and deriving the proof data from the blank of the printing data.

As described in Parags. [0013] and [0014], changes are made to the graphic data *during the production of the printing data*.

Paragraph [0038] quoted here provides complete detailed description of the preferred embodiment, and describes the simple block diagram of FIG. 8, reproduced herein, which shows the working sequence of the reproduction method. To quote Tacke



*“The CAD data 2 from the CAD system 1 and the graphic data 4 from the graphic system 3 are supplied directly to the sheet assembly system 9 that produces the printing data 10. In the sheet assembly system 9, the functions of the blank assembly and of the sheet assembly are combined, that is to say, the graphic data 4*

*are positioned in the surfaces of the unwound package provided for such a purpose, and the blanks 14 so defined are repeated on the printed sheet 15 and positioned together with the print control elements. In addition, all the changes to the graphic data 4 that are required because of production conditions, such as changed trim allowances, are made.*

*Only after such work has been concluded is the proof data 8 from a blank 14 of the finished mounted printed sheet produced and passed on to the proof system 7, the data 8 being selected automatically or by the operator. Such a process ensures that the 2-D proof or 3-D proof displayed or printed out in the proof system 7 always agrees exactly with the final appearance of the package produced.*

Note that the proof system accepts data 8 from the sheet assembly system. There is no arrow in the opposite direction. Note also that Tacke discloses explicitly (see paragraphs [0013] and [0014]) that changes are made to the graphic data *during the production of the printing data*. Thus, consistently, Tacke does not teach the design being modified by the user after being viewed on a display showing a three-dimensional package.

Thus each of Score!X and Tacke, and also the combination of Score!X and Tacke fails to teach or make obvious the combination of key steps (e) and (f) in the invention as recited in claim 1 (as amended). For example, while it might be argued that Tacke does disclose an indication of acceptability of graphics covering relevant said regions, Tacke does not disclose modifications, if required, of said graphics. As stated in Tacke, all modifications of graphics are done *during the production of the printing data*. Furthermore, the proof data 8 from a blank 14 of the finished mounted printed sheet is produced and passed on to the proof system 7 *only after such work as changes to the graphic data 4 that are required because of production conditions, such as changed trim allowances has been concluded*.

From this, it would be far from obvious for one of ordinary skill in the art to come up with the method claimed in claim 1 (as amended).

Thus, the Office has failed to show that each of Score!X, Tacke, and the combination of Score!X and Tacke teaches or makes obvious claim 1. Claim 1 (as amended) is allowable over the cited references.

**Independent claim 8** (as amended) includes means for creating a three-dimensional computer-generated image of said carton displayable on said monitor, said image including means to superimpose user-manipulable graphics according to said accepted or designed graphics on said computer-generated image displayed on said monitor, *wherein said user can confirm from visualizing said three-dimensional computer-generated image acceptability of said graphics, and can modify, as required,*

*said graphics*. As argued above, the Office has failed to show that each of Score!X, Tacke, and the combination of Score!X and Tacke teaches or makes obvious this feature. Claim 8 (as amended) is allowable over the cited references.

**Independent claim 14** (as amended) includes a computer-readable medium storing a software program that when executed by a computer processor will carry out a method comprising steps analogous to the steps of the computer implemented method of claim 1. As argued for claim 1, each of Score!X, Tacke, and the combination of Score!X and Tacke fails to teach or makes obvious all the steps recited in the method recited in claim 14 (as amended). Claim 14 (as amended) is allowable over the cited references.

**Independent claim 16** (as amended) recited a planar substrate having at least some surface regions printed with graphics. The substrate cuttable and foldable to create a three-dimensional carton. The substrate produced by a computer-implemented method comprising steps that include steps analogous to those of claim 1. As argued for claim 1, each of Score!X, Tacke, and the combination of Score!X and Tacke fails to teach or makes obvious all the steps recited in the method recited in claim 16 (as amended). Claim 14 (as amended) is allowable over the cited references.

**Independent claim 17** (as amended) recited a carton formed from a planar substrate that was printed and cut and subsequently folded to yield a three-dimensional carton having outer surface regions printed with graphics. The carton produced by a computer-implementable process that includes steps analogous to method claim 1. As argued for claim 1, each of Score!X, Tacke, and the combination of Score!X and Tacke fails to teach or makes obvious all the steps recited in the process recited in claim 17 (as amended).

Thus the Office has files to provide the necessary prima facie case for obviousness of each of the independent claims.

Allowance of the independent claims is respectfully requested.

All other claims are dependent on these allowable claims, and therefore, for at least this reason, are allowable over the cited references.

### *Conclusion*

The Applicants believe all of Examiner's rejections have been overcome with respect to all remaining claims (as amended), and that the remaining claims are allowable. Action to that end is respectfully requested.

If the Examiner has any questions or comments that would advance the prosecution and allowance of this application, an email message to the undersigned at [dov@inventek.com](mailto:dov@inventek.com), or a telephone call to the undersigned at +1-510-547-3378 is requested.

Respectfully Submitted,

December 09, 2008  
Date

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